Developmental Biology

An International Journal
Published under the Auspices of the
Society for Developmental Biology

EDITOR-IN-CHIEF: Elizabeth D. Hay

ASSOCIATE EDITORS

Igor B. Dawid
Donald A. Fischman
John W. Saunders, Jr.
Judson D. Sheridan
Herbert Stern
Robin Wallace

ASSISTANT EDITOR: Mary J. Powers

FEATURE EDITORS

Eugene Bell
Francis J. Manasek

ADVISORY EDITOR

Mac V. Edds, Jr.

VOLUME 33, 1973

ACADEMIC PRESS
New York and London

A Subsidiary of Harcourt Brace Jovanovich, Publishers

Copyright © 1973 by Academic Press, Inc.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

Contents of Volume 33

NUMBER 1, JULY 1973

ull Papers

MATTHEWS O. BRADLEY. Arginase Activity Patterns and Their Regulation during Embryonic Development in Liver and Kidney 1
DAVID SCHUBERT, HELGI TARIKAS, SUSIE HUMPHREYS, STEPHEN HEINEMANN, AND JAMES PATRICK. Protein Synthesis and Secretion in a Myogenic Cell Line 18
KEVIN E. BELL AND MICHAEL I. SHERMAN. Enzyme Markers of Yolk Sac Differentiation 38
EDWARD BERGER AND ROBERT CANTER. The Esterases of *Drosophila*. I. The Anodal Esterases and Their Possible Role in Eclosion 48
LAWRENCE D. MUSCHEK AND JERRY B. HOOK. Changes in Adenosine 3′,5′-monophosphate Induced by Parathyroid Hormone and Theophylline in the Developing Rat Renal Cortex 56
MARILYN B. RENFREE. The Composition of Fetal Fluids of the Marsupial *Marcropus eugenii* 62
JOAN S. CHLEBOWSKI, RONALD J. PRZYBYLSKI, AND PRENTISS G. COX. Ultrastructural Studies of Lizard (*Anolis carolinensis*) Myogenesis *in Vitro* 80
AIMÉE HAYES BAKKEN. A Cytological and Genetic Study of Oogenesis in *Drosophila melanogaster* 100
R. LANE SMITH AND H. S. FORREST. Variations in Isoaccepting Species of Transfer RNA during Embryogenesis of *Oncopeltus fasciatus* (Dallas) 123
EVELYN M. FREARSON, J. B. POWER, AND E. C. COCKING. The Isolation, Culture and Regeneration of *Petunia* Leaf Protoplasts 130
ROBERT J. STARK AND ROBERT L. SEARLS. A Description of Chick Wing Bud Development and a Model of Limb Morphogenesis 138
CLAUDE-LOUIS GALLIEN, CHRISTIAN AIMAR, AND FRANCOISE GUILLET. Nucleocytoplasmic Interactions during Ontogenesis in Individuals Obtained by Intra- and Interspecific Nuclear Transplantation in the Genus *Pleurodeles* (Urodele Amphibian). Morphology, Analysis of Two Enzymatic Systems (LDH and MDH) and Immunity Reactions 154
CHARLES J. EPSTEIN AND SANDRA A. SMITH. Amino Acid Uptake and Protein Synthesis in Preimplantation Mouse Embryos 171
BRADLEY N. WHITE, G. M. TENER, JEANETTE HOLDEN, AND DAVID T. SUZUKI. Analysis of tRNAs during the Development of *Drosophila* 185
PAUL G. YOUNG AND ARTHUR M. ZIMMERMAN. Synthesis of Mitochondrial RNA in Disaggregated Embryos of *Xenopus laevis* 196

Brief Notes

JOHN B. MORRILL AND FRANK O. PERKINS. Microtubules in the Cortical Region of the Egg of *Lymnaea* during Cortical Segregation 206
CYRIL D. SAYLES, LEON W. BROWDER, AND JOHN H. WILLIAMSON. Expression of Xanthine Dehydrogenase Activity during Embryonic Development of *Drosophila melanogaster* 213

opyright © 1973 by Academic Press, Inc.
ll rights of reproduction in any form reserved.

Steven B. Oppenheimer, Richard L. Potter, and Mary Lee Barber. Alteration of Sea Urchin Embryo Cell Surface Properties by Mycostatin, a Sterol Binding Antibiotic.... 21
Joseph B. Warshaw and Robert E. Kimura. Cellular Energy Metabolism during Fetal Development. V. Fatty Acid Synthesis by the Developing Heart... 22

Features

News, Opinion and Letters.... f-1
Current Literature.... f-1
Editor's Index.... f-1

Number 2, August 1973

Leslie S. Cutler and Anand P. Chaudhry. Intercellular Contacts at the Epithelial–Mesenchymal Interface during the Prenatal Development of the Rat Submandibular Gland.... 22
R. A. Laskey, J. C. Gerhart, and J. S. Knowland. Inhibition of Ribosomal RNA Synthesis in Neurula Cells by Extracts from Blastulae of *Xenopus laevis*.... 24
J. Kevin Dorsey and Stephen Roth. Adhesive Specificity in Normal and Transformed Mouse Fibroblasts.... 24
Alfred J. Coulombre and Jane L. Coulombre. The Skeleton of the Eye. II. Overlap of the Scleral Ossicles of the Domestic Fowl.... 25
Marilyn A. Ludueña. Nerve Cell Differentiation *in Vitro*.... 26
Barry W. Wilson, Pamela S. Nieberg, Charles R. Walker, Thomas A. Linkhart, and D. Michael Fry. Production and Release of Acetylcholinesterase by Cultured Chick Embryo Muscle.... 28
Gerald S. Golden. Prenatal Development of the Biogenic Amine Systems of the Mouse Brain.... 30
Larry F. Lemanski. Morphology of Developing Heart in Cardiac Lethal Mutant Mexican Axolotls, *Ambystoma mexicanum*.... 31
Elsie Hasskarl, Herbert Oberlander, and Raymond E. Stephens. Microtubules and Tracheole Migration in Wing Disks of *Galleria mellonella*.... 33
Julie H. Chamley, Gordon R. Campbell, and Geoffrey Burnstock. An Analysis of the Interactions Between Sympathetic Nerve Fibers and Smooth Muscle Cells in Tissue Culture.... 34
Mary Alice Yund, Fotis C. Kafatos, and Jerome C. Regier. Posttranscriptional Regulation of Specific Protein Synthesis in the Silkmoth Wing, as Revealed by Actinomycin D.... 36
Jon R. Polansky and Thomas Peter Bennett. Alterations in Physical Parameters and Proteins of Lens from *Rana catesbeiana* during Development.... 38
Yu-Chih Hsu. Differentiation *in Vitro* of Mouse Embryos to the Stage of Early Somite.... 40
M. H. Cross, P. C. Cross, and R. L. Brinster. Changes in Membrane Potential during Mouse Egg Development.... 41
Richard A. Fluck and R. C. Strohman. Acetylcholinesterase Activity in Developing Skeletal Muscle Cells *in Vitro*.... 41
Bruce S. Baker. The Maternal and Zygotic Control of Development by *cinnamon*, A New Mutant in *Drosophila melanogaster*.... 42
James W. Fristrom, W. Robert Logan, and Collin Murphy. The Synthetic and Minimal Culture Requirements for Evagination of Imaginal Discs of *Drosophila melanogaster in Vitro*.... 44

ief Notes

PETER B. ARMSTRONG AND DAVID PARENTI. Scanning Electron Microscopy of the Chick Embryo 457
JOHN F. ASH, BRIAN S. SPOONER, AND NORMAN K. WESSELLS. Effects of Papaverine and Calcium-free Medium on Salivary Gland Morphogenesis 463
MARILYN A. LUDUEÑA. The Growth of Spinal Ganglion Neurons in Serum-free Medium 470
OSAMI YUKAWA AND HIDETOSHI KOSHIHARA. Acetylation of Proteins in the Course of Sea Urchin Development 477
BENEDETTA LUPPIS AND WILLIAM J. RUTTER. Induction of Tyrosine Aminotransferase by Triamcinolone during Rat Liver Development *in Vitro* 482
UTHOR INDEX 487

atures

News, Opinion, and Letters f-13
Current Literature f-15
ditor's Subject Index f-17

he Subject Index for Volume 33 will appear in the December 1973 issue as part of a cumulative index for the year 1973.